

# ALL THINGS DIGITAL

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## SECURITY RISKS AND EXPOSURES

I've recently been thinking about technology security risks and exposures. Yes, most exploits include a human element – someone clicking on the phishing email or a person accessing a risky web site that downloads a nefarious payload. While security diligence for the human element is essential, I have become concerned about the security risks of our technology supply chain. Here are a few headlines to consider:

- Supermicro server motherboards may have been hacked to include malicious chips (“New Evidence of Hacked Supermicro Hardware Found in U.S. Telecom”, Robertson, Jordan and Riley, Michael, October 9, 2018, Bloomberg).
- Security risks (Meltdown and Spectre) were identified in the PC chip architecture (“Spectre and Meltdown processor security flaws – explained”, Gibbs, Samuel, January 4, 2018, The Guardian).
- Most of the chip foundries are located in nations that we don't have the best relations with (Wikipedia, List of semiconductor fabrication plants).
- The U.S. Department of Defense mandates U.S. manufactured chips for their most sensitive applications (Department of Defense and the National Security Agency (NSA) Trusted Foundry Program).
- And earlier this year, the administration blocked the Broadcom-Qualcomm merger due to national security concerns (“Trump Blocks Broadcom's Bid for Qualcomm”, Kang, Cecilia and Rappeport, Alan, March 12, 2018, New York Times).

I just pulled off the cover of my new PC and determined that all of the chips were manufactured in foreign countries. Seven of the chips were manufactured in China.

Hardware manipulation is extremely hard to detect.

I don't have any recommendations or solution to the problem. On the other hand, it is unsettling that the technology that I depend on every day incorporates risks, however small, that I really don't have any control over.

Something to consider on your next technology purchase . . .

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Dennis Conley is a multi-published, innovative and transformational leader with comprehensive experience delivering market differentiating digital strategies and solutions across diverse industry verticals. With his In-depth executive and consulting expertise, he helps corporations plan and implement digital solutions, business improvement, and post-merger integration programs. A strategic thinker and futurist, he is regularly sought after for corporate strategy development.